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TESTIMONY ON YUCCA MOUNTAIN NUCLEAR WASTE FACILITY AND TRANSPORT OF WASTE THROUGH SAN BERNARDINO COUNTY

My name is Doctor Ronald Hattis. I am a resident of San Bernardino, California, a public health physician, and a member of Physicians for Social Responsibility.

- 1 The Draft Environmental Impact Statement regarding the Yucca Mountain waste repository proposes to bury upwards of 86,000 metric tons of highly irradiated nuclear fuel, conservatively, a minimum of 30 billion curies of radioactivity. If sited, Yucca Mountain, less than a half-day's drive from my home, will become one of the most toxic and dangerous areas on the planet.

The Department of Energy at present has not disclosed the route by which this waste would be transported from the West Coast to Nevada. But one can presume that the Interstate highways, I-15, and perhaps I-40, would be employed; as well as the Union Pacific and Santa Fe track-lines that ~~trans~~verse San Bernardino and Riverside Counties.

This is troubling. This is by far the largest nuclear waste transportation project ever conceived, yet the plans contain too many unknowns for it to be fully safe. We do not yet know how this waste will react when shipped, nor are we fully confident that the containers -- which have yet to be tested in a real life situation -- can stand up in an accident.

Upwards of 2,000 casks traveling via truck and rail will travel through the Inland Empire, over 50,000 shipments nationwide. An accident would devastate the people and environment: are we so absolutely confident that no traffic accident will take place? A perfect driving record of 2,000 casks moving safely through San Bernardino County?

I sincerely doubt that there will be a 100% perfect driving record. San Bernardino County has seen non-nuclear hazardous waste spills on its roads frequently due to trucks overturning or involved in collisions. Nuclear spills will cause not only hazards but also chaos. Earlier this month, a major highway in the San Francisco Bay Area was closed for hours due to the mere suspicion that radioactive waste spilled on the roadway. In 1997, Interstate-5 in Orange County was closed for more than eight hours when a minute amount of relatively benign medical radioactive waste leaked from an accident.

From a public health perspective, such a plan transport of highly dangerous waste throughout the nation, and on our highways, through densely populated areas, places at risk many millions of individuals ^{who} ~~that~~ would otherwise not be placed in harm's way.

- 2 The Draft Environmental Impact Statement before us today does not acknowledge the uniquely lethal nature of the waste, and fails to provide sufficient information on the unique radiological characteristics of highly irradiated nuclear fuel.

2 cont. The Department of Energy barely touches on the radiological risks posed by highly irradiated nuclear fuel. Information on the total activity (in curies) and the surface dose rate (in rems per hour) of the assemblies of irradiated fuel is essential for the assessment of risks posed by the transportation and burial of radioactive waste, yet DOE does not provide such data. According to the State of Nevada, a typical assembly from a pressurized water reactor will contain, even after 26 years of cooling, 31,000 curies of cesium-137 and 21,000 curies of strontium-90, and is a powerful source of penetrating gamma and neutron radiation.

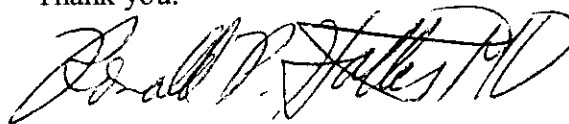
If such an accident were to take place in our community, it would be as if a small neutron bomb were exploded in our midst. Thousands of rems would bombard those closest to a catastrophic accident. Ten minutes exposure would be enough to deliver a speedy but painful death to virtually all people exposed. The brain cells of those exposed would swell and enlarge, producing encephalopathic symptoms. The victim would undergo confusion, delirium, stupor, psychosis, loss of muscle-control, intense fever, and assuredly, death.

One unshielded assembly would have enough radiation to give a person standing next to it a dose of at least 100 rem per minute. A few minutes of exposure would give an individual acute radiation sickness. Those exposed would have Hiroshima-like symptoms: hair-loss, skin sloughing-off in ulcerous gouges in the body, vomiting, diarrhea. The count of white and red blood cells would tumble and the victim would likely die of infection or massive internal hemorrhaging.

Lower doses of radiation are now known to cause cardiovascular and digestive diseases, and abnormalities in the immune system. After only two minutes of exposure to an unshielded assembly, cancer risk would roughly double, and symptoms of radiation sickness would probably appear. On the cellular level, radiation shoots holes through the body's DNA; the very mechanism of forming cancer. Leukemia and other blood cancers may arise five to ten years after exposure. Cancers may arrive anywhere from 12 to 60 years later. Genetic diseases and congenital anomalies also visit future generations of those exposed to ionizing radioactivity.

3 In drafting a plan to deal with highly radioactive waste, I encourage the Department of Energy to form
 4 a special methodology for dealing with such waste. Safety must be its chief concern. The Department
 5 of Energy, which is charged with promoting nuclear power, may need to recuse itself from the disposal
 6 process. Any dump will need to employ EPA exposure standards in order to limit harm. The
 department must release all radiation health studies heretofore classified as secret, so that good science
 can replace expedient science. Establish epidemiological studies for those nuclear workers not yet
 studied.

Thank you.



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